

Date: Thursday, 6/29/2006 10:54:19 AM  
 User: Kim Johnston

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : X-BOLT SPACER
<b>Job Number</b> : 27778	
<b>Estimate Number</b> : 12469	
<b>P.O. Number</b> : <u>NIA</u>	<b>Part Number</b> : D35043
<b>This Issue</b> : 6/29/2006 <b>S.O. No.</b> : <u>NIA</u>	<b>Drawing Number</b> : D3504 PRELIMINARY
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : <u>NIA</u> <b>Type</b> : MACHINED PARTS	<b>Drawing Revision</b> : PREL
<b>Previous Run</b> : 27718	<b>Material</b> : <u>NIA</u>
<b>Written By</b> : <u>SEE COMMENT BELOW</u>	<b>Due Date</b> : 7/6/2006 <b>Qty:</b> <u>20</u> <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>06-06-29</u>	
<b>Comment</b> : Est Rev: New Issue 06-06-20 JLM	

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	M6061T6T0375W049	6061-T6 Tube .375 x.049W
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**Comment:** Qty.: 0.2972 f(s)/Unit Total: 2.9715 f(s)  
 6061-T6 Tube .375 OD x.049W  
 (M6061T6T0375xw.049)  
 Batch: M101448

70"M8 06/07/02

2.0	HARDINGE	HARDINGE CNC LATHE SMALL
-----	----------	--------------------------



**Comment:** HARDINGE CNC LATHE SMALL  
 1-TURN AS PER FOLIO FA643 & DWG D3504 ,  
 FOLIO REV: NIA (new issue)  
 DWG REV: A

2-DEBURR AS REQUIRED

M8 06/07/02 20

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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**Comment:** INSPECT PARTS AS THEY COME OFF MACHINEM8 06/07/02 20

4.0	QC8	SECOND CHECK
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**Comment:** SECOND CHECK06/07/04 20

5.0	PACKAGING 1	PACKAGING RESOURCE #1
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**Comment:** PACKAGING RESOURCE #1

Identify and Stock

Location: ST 448H.M 06-07-0420

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DS Date: 06/07/05

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Thursday, 6/29/2006 10:54:19 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-BOLT SPACER

Job Number: 27778

Part Number: D35043

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

SP 06/27/05

Job Completion



Date

Please  
Return  
PH to  
for conformity.  
U 26-0705  
JMP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

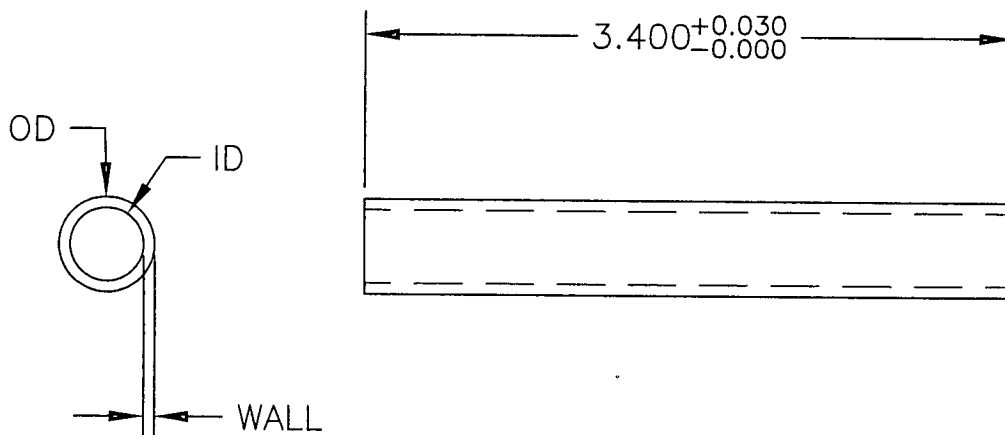
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

**PROTOTYPE**  
 PLEASE RETURN ALL ISSUED  
 DATA TO ENGINEERING  
 06-06-19 #4

DESIGN	DRAWN BY	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO. D3504	REV. A SHEET 1 OF 1
DATE 06.04.21	TITLE CROSS BOLT SPACER		SCALE 1:1
A	06.04.21	NEW ISSUE	

**PRELIMINARY ISSUE**

*Est Done*



**D3504-1/-3 CROSS BOLT SPACER PARTS LIST**

PART NUMBER	OD	WALL	ID (REF)	MATERIAL SPEC
D3504-1	0.500 <i>647</i>	0.049	0.402	M6061T6T0.500W.049
D3504-3	0.375 <i>647</i>	0.049	0.277	M6061T6T0.375W.049

**D3504-1/-3 CROSS BOLT SPACER**

- 1) MATERIAL: 6061-T6 TUBING PER WW-T-700/6 OR QQ-A-200/8
- 2) FINISH: NONE
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHOP COPY  
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 WORK ORDER  
 NO. *27778*

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# KAISER CHANDLER

CHANDLER PLANT  
BOX 5011 4573 W WILLIS ROAD  
CHANDLER AZ 85226  
PH: 520.796.1097  
FAX: 520.796.0996  
SALES: 800.628.8274

## CERTIFICATION and PHYSICAL TEST RESULTS

QP 026A

These results are for **MARMON/KEYSTONE CORP**  
Mill Number ..... **175-43923.** Purchase Order No **25-19569-001**  
Alloy ..... **6061** Temper..... **T6**  
Part No, Item No, Commodity No or Inventory No  
Size Description. **.375 IN OD X .049 IN WALL**  
Specification(s). **WW-T-700/6F ASTM B210-04 AMS 4082N**

Additional procedures as called for on Specification:

**MADE IN U.S.A. WE TAKE EXCEPTION TO PARA. 5.2.1. Per AMS 4082N, WAS NOT OILED.**

Limits	Chemical Composition			Per Aluminum Standards and Data 2003							
MIN	0.40	*	0.15	—	0.8	0.04	—	—	—	Each 0.05	Remainder
MAX	0.8	0.7	0.40	0.15	1.2	0.35	—	0.25	0.15	Total 0.15	
Actuals	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Others	Al
	0.83	0.22	0.25	0.03	0.95	0.05		0.02	0.02		
	0.58	0.22	0.20	0.02	0.91	0.06		0.02	0.02		
	0.80	0.19	0.22	0.02	0.92	0.06		0.01	0.02	Each 0.05	Remainder
										Total 0.15	

\* For WW-T-700/4 specification, maximum Si plus Fe is .45%.

\*\* 1100 Alloy Max Si + Fe is 0.95 %

Mechanical Properties				
Lot #	Temp	Yield PSI	Ultimate PSI	Elongation %
43921 A/T6		43,000	46,000	13
43921 B/T6		42,600	45,800	14

### Domestic Melt Source Made in USA

We hereby certify that the material covered by this report has been inspected in accordance with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description; and that samples representative of the material met the composition limits and had the mechanical properties as indicated.

Date 09/12/2005

*J. A. Merziak*

J. A. Merziak  
Tech. Mgr. Tube

CertAct

SanCera

Q.C. Reviewed  
MAR 15 2006